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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,109	10/31/2003	Edward C. Gunzel	FA/261	1873

28596 7590 05/30/2006

GORE ENTERPRISE HOLDINGS, INC.  
551 PAPER MILL ROAD  
P. O. BOX 9206  
NEWARK, DE 19714-9206

EXAMINER
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COLE, ELIZABETH M

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/699,109

Applicant(s)

GUNZEL ET AL.

Examiner

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) 33-81 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/4/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 16-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2001/0006173 to Rock et al. Rock discloses a fabric having a conductive cable attached to it. The fabric can be a knitted, woven or nonwoven material and can comprise multiple layers. The fabric can be hydrophobic or hydrophilic. See paragraph 0020. The conductive cable can be covered by a barrier layer which corresponds to the claimed tape. The barrier layer can comprise multiple layers. The layers can comprise polyurethane and PTFE among other materials. The barrier layer can be adhesively bonded to the fabric layer and overlies the conductive cable. See figure 12 as well as paragraph 0031. With regard to the limitations set forth in claims 22-26, no structure is set forth for the claimed articles. Therefore, these statements have been considered to be statements of intended use. Rock et al differs from the claimed invention because although Rock et al does disclose employing multiple fabric layers it does not explicitly state that the cable extends across two of the layers. However, since Rock et al teaches forming the fabrics comprising the conductive cable into garments such as jackets which have multiple fabric panels and seams, it would have been obvious to have extended the conductive cable across more than one fabric panel, motivated by the expectation that this would allow all the panels to be able to be heated using the conductive cable. With regard to the limitations

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regarding the conductivity of the cable, since the cables in Rock are used as heating elements, it would have been obvious to have selected the appropriate conductivity and resistance in the cables in order to produce a material having the desired properties. With regard to the limitations regarding durability after washing, since Rock appears to disclose the same structure, presumably the material of Rock would meet these limitations.

3. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rock et al as applied to claims above, and further in view of Cordia et al, U.S. Patent No. 5,236,765. Rock discloses a heatable fabric as set forth above. Rock differs from the claimed invention because Rock et al does not disclose the particular types of adhesives which can be used to bond the barrier layer which overlies the cable to the fabric layer. Cordia teaches at col. 9, lines 4-16, that pressure sensitive, hot melt or curable adhesives can be used to bond heating elements to fabric layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to have employed the particular adhesives set forth by Cordia to bond the barrier tape of Rock to the fabric layer, since Cordia teaches that such adhesives are suitable for use to bond heating elements to fabric layers.

4. Claims 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rock as applied to claims above, and further in view of Parker, U.S. Patent No. 5,658,164. Rock discloses a heatable fabric as set forth above. Rock differs from the claimed invention because Rock does not disclose employing a micro ribbon as the conductive cable. Parker teaches that micro-ribbon cables which comprise an

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insulation layer can be used to form electrical connections. Therefore, it would have been obvious to one of ordinary skill in the art at the time to have employed a micro-ribbon as the cable in Rock. One of ordinary skill in the art would have been motivated to employ a micro ribbon cable because Parker teaches that such cables are rugged and durable. See col. 4, lines 40-45.

5. Applicant's arguments filed 3/10/06 have been fully considered but they are not persuasive. Applicant argues that there is no motivation or incentive to modify Rock et al because Rock does not teach that the connector can extend across seams of garments. Applicant points to the fact that in Rock where the two front panels comprise the cable that the cable does not extend across the two panels. However, the two panels in Rock are on opposite sides of the opening of the jacket so the cables could not extend from one panel to the other or else they would extend across the closure and would not allow the jacket to be put on in the conventional way but instead would require that it be pulled on over the head. However, conventionally jackets and shirts can comprise several panels on a single side, in order to enhance the fit of the garment. In those cases, it would have been obvious to have extended the cables across the different panels of the garment rather than making separate cables for each panel because it would be easier, less expensive, require fewer connections and thus have less possibility for malfunctioning.

6. Applicant argues that Rock does not teach that the protective layer comprises an adhesive that adheres to the conductive element. However, Rock teaches that the conductive cable can be covered by a barrier layer which corresponds to the claimed

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tape. The barrier layer can comprise multiple layers. The layers can comprise polyurethane and PTFE among other materials. The barrier layer can be adhesively bonded to the fabric layer and overlies the conductive cable. See figure 12 as well as paragraph 0031. The adhesive would also therefore necessarily adhere to the conductive element since it is bonded to the protective layers. Therefore the protective layers comprise an adhesive and the adhesive is bonded to the conductive layer and the fabric. Also, looking at Lumb et al, which was incorporated by reference as showing suitable composite fabrics, Lumb teaches that both continuous and discontinuous adhesive layers can be used to bond the layers. See col. 4, line 55 – col. 5, line 22. Therefore the rejection has been maintained.

7. Applicant's amendments and arguments have overcome the 112 2<sup>nd</sup> paragraph rejections.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

  
Elizabeth M. Cole  
Primary Examiner  
Art Unit 1771

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